

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

BRAUN GmbH,

Plaintiff,

v.

RAYOVAC CORPORATION,

Defendant.

Civil Action No. 03-CV-12428-WGY

SECOND REPORT OF SAMIR NAYFEH

Dated: June 13, 2005

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I. INTRODUCTION

I am an Assistant Professor of Mechanical Engineering at the Massachusetts Institute of Technology in Cambridge, Massachusetts. I previously submitted a report, dated May 23, 2005, in connection with the above captioned litigation. A copy of my curriculum vitae was attached to that first report.

I was asked by Braun GmbH ("Braun") to review the First Expert Report of Samuel R. Phillips, PE, dated May 23, 2005, and to opine as to the bases set forth in Mr. Phillips' report upon which he purports to rely in support his conclusion that two patents -- U.S. Patent No. 5,711,328 (the "'328 Patent") and U.S. Patent No. 5,649,556 (the "'556 Patent"), which I understand to be owned by Braun -- are invalid.

In order to arrive at my opinion, I have again reviewed the '328 Patent and the '556 Patent. I have also reviewed the patent prosecution histories for each of these patents. In addition, I have reviewed Mr. Phillips' report and the tabs and exhibits thereto. Finally, I have reviewed the transcript from the March 15, 2005 *Markman* hearing.

II. OPINION SUMMARY

I disagree with Mr. Phillips' conclusion that bases set forth in his report support his conclusion that the claims of the '328 Patent and the '556 Patent are invalid. In particular, none of the claims 11, 12, 14, and 18 of the '328 Patent is anticipated by the prior art cited by Mr. Phillips. In addition, none of the claims 1, 6, and 18 of the '556 Patent is anticipated by that prior art. Moreover, none of these claims is obvious to one of ordinary skill in the art in light of that prior art. Finally, I disagree with Mr. Phillips' conclusions on the issues of indefiniteness, written description, new matter, best mode, and inventorship.

III. NONE OF THE CLAIMS OF THE '328 AND '556 PATENTS IS INVALID ON THE GROUND OF ANTICIPATION

A. THE '328 PATENT

1. CLAIM 11 OF THE '328 PATENT

Claim 11 is directed to a cleaning device comprising:

a cradle structure adapted to receive a shaving head of a shaving apparatus,

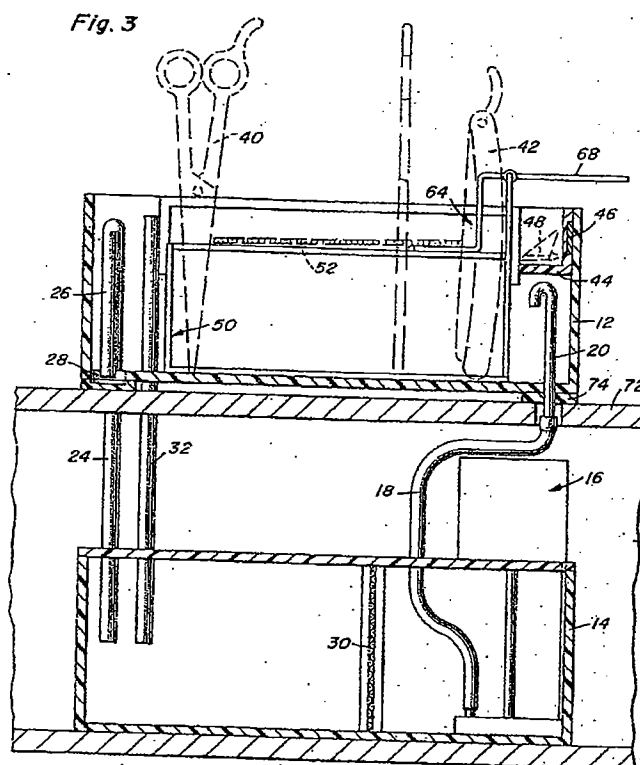
a cleaning fluid container,

a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure,

said cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure, and

addition, the sterilizer includes an upper tank (12) with a shelf (34) with holes and slots for holding scissors and razors. The upper tank (12) also includes a shelf (44, shown in Figure 3 below) with magnets (46) for holding clipper blades that have been disassembled from a hair clipper. *See id.* at col. 3, lines 27-40. In operation, sterilizing fluid is pumped from the lower tank to the upper tank via a conduit (18). *See id.* at col. 4, lines 2-7. The sterilizing fluid then builds up in the upper tank, soaking the barber tools in cleaning fluid. Once the tools are sufficiently clean, a siphon (24) sucks the fluid out of the upper tank to the lower tank, wherein lies a filter. *See id.* at col. 4, lines 8-14. The tools then drip dry. *See id.* at col. 4, line 14.

Cradle Structure Element. Mr. Phillips argues that the shelf 44 of the McKiney sterilizer (illustrated below in Figure 3 of the McKiney Patent) into which clipper blades are placed and held with magnets, along with the entire upper tank 12, is "a cradle structure adapted



to receive a shaving head of a shaving apparatus." *See Phillips Report at ¶103.* I disagree.

In particular, the Court has construed the cradle structure element of claim 11 as a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both. Shelf 44 and upper tank 12 of the McKiney sterilizer do not constitute a structure adapted to support or receive a shaving head of a shaving apparatus. Instead, shelf 44 of the McKiney sterilizer is not adapted to support or receive anything. The clipper head (that is, the shaving head of Mr. Phillips' purported shaving

apparatus) is not supported or received by shelf 44. The shelf 44 merely provides a surface onto which clipper blades that have been disassembled from the head of a hair clipper apparatus can be support by means of magnets. Such a surface cannot be properly called a "cradle structure adapted to receive a shaving head of a shaving apparatus," which one skilled in the art would understand to require a structure of form and dimensions to "cradle" the shaving head. In addition, upper tank 12 is a large rectangular tub that holds liquid for sterilizing barber tools. Like the shelf 44 it does not support or receive the head of a hair clipper. Thus, neither shelf 44 nor upper tank 12 is adapted to support or receive a shaving head of a shaving apparatus.

In sharp contrast, the cradle structure of claim 11 is adapted to receive the shaving head of a dry shaving apparatus, without disassembly of the shaving head into its cutter and foil components. Indeed, the '328 Patent is clear that the invention does not involve disassembly of the shaving head of the shaving apparatus. See '328 Patent, Figures 1,2, and 6 (showing assembled shaving apparatus with cradle supporting and receiving an assembled shaving head); col. 2, lines 49-51 ("This enables the shaving apparatus to be inserted in the cradle without any effort and to be withdrawn therefrom without the need to utilize any parts closing the cradle"); col. 3, lines 60-63 ("Still further, it is advantageous that the shaving apparatus is insertable into a supporting structure configured as a bracket or a wall mount . . ."); col. 5, lines 1-4 ("Setting a switching means from a first to a further position mechanically and/or electrically interlocks the shaving apparatus in the casing of the cleaning device for the full length of the cleaning and drying cycle.").

Therefore, the McKiney Patent does not disclose the claimed cradle structure of claim 11 of the '328 Patent.

Drying Device Element. Mr. Phillips next argues that siphon tube 24 is "a drying device." See Phillips Report at ¶108. I disagree.

In particular, siphon tube 24 merely drains the sterilizing fluid from the upper tank to the lower tank. The tools then drip dry. See McKiney Patent, col. 4, lines 13. The siphon tube 24 is not a drying device since it is not a mechanism for active drying of the barber tools.

Therefore, the McKiney Patent does not disclose the claimed drying device.

In sum, the McKiney Patent does not anticipate claim 11 of the '328 Patent because, at a minimum, it does not disclose the claimed cradle structure and drying device.

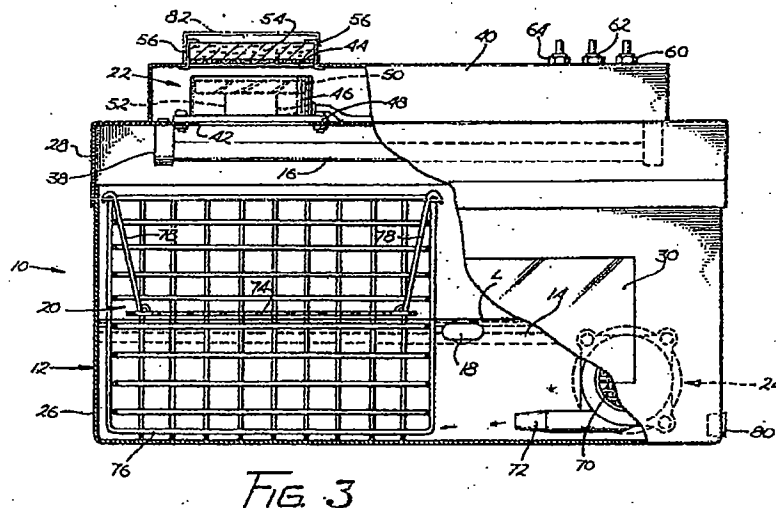
Davies Patent

Mr. Phillips opines that the Davies Patent (U.S. Patent No. 3,478,758) anticipates claim 11 of the '328 Patent. See Phillips Report at ¶¶113-118. I disagree. In particular, the Davies Patent fails to disclose at least the following elements of claim 11:

- "a cradle structure adapted to receive a shaving head of a shaving apparatus,"

- “a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure,” and
- “said cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure.”

The Davies Patent discloses a cleaning and sterilizing device for barber tools using a germicidal lamp sterilizer. *See* Davies Patent, col. 1, lines 22-24. Figure 3 of the Davies Patent is reproduced below. The Davies device consists of a container (12) for holding cleaning fluid and germicidal lamps. *See id.* at col. 2, lines 22-23. Within the container is a perforated tray (74) for holding tools to be sterilized. *See id.* at col. 4, lines 34-37. During the cleaning operation, the tray (74) is lowered into the cleaning fluid which occupies approximately one-half of the container 12. *See id.* at col. 3, lines 14-17. In this lowered state, a pump is activated within the fluid causing a whirlpool effect. *See id.* at col. 4, lines 17-20. Thereafter, the tray is lifted from the cleaning fluid, but remains inside container 12. While in this raised position, exhaust blower 22 exhausts ozone into the atmosphere and thereby dries the tools. *See id.* at col. 5, lines 31-36, 49-51. Cleaning fluid is fed to and drained from the device through fitting 80.



Cradle Structure Element. Mr. Phillips argues that perforated tray 74 is “a cradle structure adapted to receive a shaving head of a shaving apparatus.” *See* Phillips Report at ¶114. I disagree.

In particular, tray 74 is a basket that is not adapted to receive a shaving head of a shaving apparatus. As Mr. Phillips notes, the Davies Patent mentions hair clippers, *see* Davies Patent, at col. 5, line 75; however, the Davies Patent teaches placement of the clipper blades between a pair of counter-rotating brushes mounted on a motor enclosed in the casing at the rear of the container, *See id.* at col. 5, line 73 through col. 6, line 2. Thus,

contrary to Mr. Phillips suggestion, the Davies Patent teaches support of clipper blades by the brushes rather than placement into the tray 74. Such brushes are do not constitute a cradle structure.

To use the Davies device to sterilize hair clippers on tray 74, one would need to disassemble the head of the hair clipper – Mr. Phillips' purported shaving apparatus – and remove the clipper blades. The tray 74 could provide a surface onto which clipper blades that have been disassembled from the head of a hair clipper apparatus can be support by means such as magnets. Such a surface cannot be properly called a "cradle structure" and is not adapted to receive the shaving head of a shaving apparatus.

Therefore, the Davies Patent does not disclose the claimed cradle structure.

Feed Device Element. Mr. Phillips next argues that that because, in the Davies device, "fluid is fed from an external source through fitting 80" the Davies device discloses "a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure." See Phillips Report at ¶ 116. I disagree.

The Court has construed the feed device element of claim 11 as a mechanism that feeds cleaning fluid from the cleaning fluid container to the cradle structure. The Davies device provides for no such mechanism. Instead, the cleaning fluid level of the Davies device is adjusted by manually feeding (through a hose connected to a conventional water tap) additional cleaning fluid through fitting 80. See Davies Patent, col. 4, lines 66-69, col. 5, lines 4-6. This manner of feeding is not properly considered a mechanism that feeds cleaning fluid.

Moreover, the claimed feeding device feeds cleaning fluid from the cleaning fluid container to the cradle structure. In this case, Mr. Phillips argues that the cleaning fluid container of the Davies device is container 12. See Phillips Report at ¶115. The Davies device provides no mechanism for feeding cleaning fluid from container 12 to tray 74, Mr. Phillips' supposed cradle structure. Instead, cleaning fluid is fed manually via an external source to container 12. See Davies Patent, col. 4, lines 66-69.

Therefore, the Davies Patent does not disclose the claimed feed device.

Elevation Of The Cradle Structure Element. Mr. Phillips next argues that that the Davies Patent discloses, in one embodiment of the device, a "cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure." See Phillips Report at ¶117. I disagree.

The embodiment referenced by Mr. Phillips is described in the Davies Patent as follows:

the implement tray 74 is supported in its elevated position of FIGURE 3, and the liquid 14 is initially fed to the container 12, through the fitting 80, until the liquid level rises above the implement on the tray. The implement is then submerged in its washing position within the liquid.

Davies Patent, col. 4, line 69 through col. 5, line 1. It is clear from this description that the tray 74 is not above the fluid level of the cleaning fluid in the cleaning fluid container during the entire feeding operation. Specifically, during the feeding operation the cleaning fluid "level rises above the . . . tray." Davies Patent, col. 4, lines 74-75.

Therefore, the Davies Patent does not disclose the claimed elevation of the cradle structure relative to the cleaning fluid level in the cleaning fluid container during feeding.

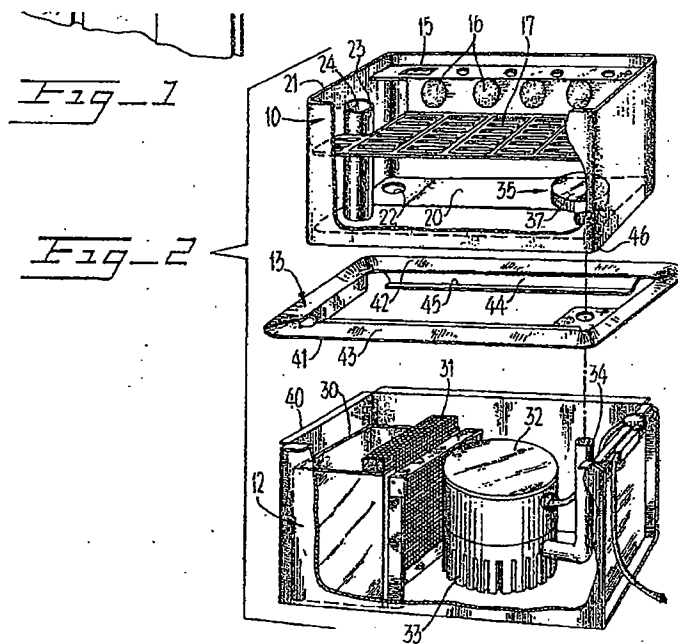
In sum, the Davies Patent does not anticipate claim 11 of the '328 Patent because, at a minimum, it does not disclose the claimed cradle structure, feed device, and elevation of the cradle structure relative to the cleaning fluid level in the cleaning fluid container.

Maatz Patent

Mr. Phillips opines that the Maatz Patent (U.S. Patent No. 3,500,840) anticipates claim 11 of the '328 Patent. See Phillips Report at ¶¶122-127. I disagree. In particular, the Maatz Patent fails to disclose at least the following elements of claim 11:

- "a cradle structure adapted to receive a shaving head of a shaving apparatus," and
- "a drying device."

The Maatz Patent discloses another sterilizing device for barber shop tools. See Maatz Patent, col. 1, lines 23-25. Figure 2 of the Maatz Patent is reproduced below. The Maatz sterilizer includes a storage tank (12) that holds a filter tank (30) and a pump (32). See id., col. 2, lines 43-45. The filter tank consists of a filter (31) and holds sterilizing fluid. See id. The Maatz sterilizer also includes a cleaning tank (10) with a rack (15) with holes and slots for holding barber tools and a grid (17) for holding larger barber tools. See id., col. 2, lines 20-23. In operation, cleaning fluid is pumped from the filter tank (30) to the cleaning tank (10) and allowed to drain via drain hole (22) back to the filter tank, where the cleaning fluid is filtered. The pump and drain hole are designed such that the pump pumps fluid into the cleaning tank at a rate faster than it can exit the tank via the drain hole, allowing cleaning fluid to build up in the cleaning tank.



Cradle Structure Element. Mr. Phillips argues that the cleaning tank 10 is “a cradle structure adapted to receive a shaving head of a shaving apparatus.” See Phillips Report at ¶122. In doing so, Mr. Phillips cites to a portion of the Maatz Patent that describes rack (15) and grid (17). I disagree that either cleaning tank 10 or rack (15)/grid (17) discloses the claimed cradle structure.

In particular, cleaning tank (10) is simply a large rectangular tub that is filled with cleaning fluid. It is adapted to receive sterilizing fluid; it is not adapted to receive a shaving head of a shaving apparatus. Nor are rack (15) and grid (17) properly considered “cradle structures” for a shaving head of a shaving apparatus. To the extent a “hair clipper” is considered a “shaving apparatus” as described in ’328 Patent, it is clear that the Maatz sterilizer would require disassembly of the clipper head and removal of the clipper blades therefrom. Rack (15) and grid (17) merely provide surfaces onto which clipper blades that have been disassembled from the head of a hair clipper apparatus can be supported by means of magnets. See Maatz Patent, col. 2, lines 27-32. Such surfaces cannot be properly called “cradle structures” and are not adapted to receive a shaving head of a shaving apparatus.

Therefore, the Maatz Patent does not disclose the claimed cradle structure.

Drying Device Element. Mr. Phillips next argues that drain hole 22 is “a drying device.” See Phillips Report at ¶127. I disagree.

In particular, drain hole 22 merely drains the sterilizing fluid from the cleaning tank to the storage tank. The tools then drip dry. See Maatz Patent, col. 3, lines 26-30. The drain hole 22 is not a drying device since it is not a mechanism for active drying of the barber tools.

Therefore, the Maatz Patent does not disclose the claimed drying device.

In sum, the Maatz Patent does not anticipate claim 11 of the '328 Patent because, at a minimum, it does not disclose the claimed cradle structure and drying device.

2. CLAIM 12 OF THE '328 PATENT

Claim 12 of the '328 Patent adds one limitation to claim 11: that the drying device comprises an impeller. See '328 Patent, col. 14, lines 24-25.

Davies Patent

Mr. Phillips opines that the Davies Patent anticipates claim 12 of the '328 Patent. See Phillips Report at ¶119. For at least the reasons set forth above in connection with my discussion of claim 11 of the '328 Patent and the Davies Patent, I disagree.

3. CLAIM 14 OF THE '328 PATENT

Claim 14 of the '328 Patent is directed to a cleaning device comprising:

a cradle structure adapted to receive a shaving head of a shaving apparatus, said cradle structure being permanently open to atmosphere,

a cleaning fluid container,
a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure, and

said cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure.

See '328 Patent, col. 14, lines 28-38. Claim 14 of the '328 Patent is identical to claim 11 except that claim 14 includes the limitation that the cradle structure be permanently open to atmosphere and does not require that the cleaning system include a drying device.

McKiney Patent

Mr. Phillips opines that the McKiney Patent anticipates claim 14 of the '328 Patent. See Phillips Report at ¶¶109-110. For at least the reasons set forth above in connection with my discussion of claim 11 of the '328 Patent and the McKiney Patent, I disagree.

Davies Patent

Mr. Phillips opines that the Davies Patent anticipates claim 14 of the '328 Patent. See Phillips Report at ¶¶120-121. For at least the reasons set forth above in connection with my discussion of claim 11 of the '328 Patent and the Davies Patent, I disagree.

Cradle Structure Open To The Atmosphere Element. In addition, Mr. Phillips argues that tray 74 – Mr. Phillips’ supposed cradle structure -- is “open to the atmosphere” because it is contained within container 12 upon which is mounted the blower 22 and the deodorizing cartridge that, according to Mr. Phillips, “permanently” vent the cleaning device to the atmosphere. See Phillips Report at ¶121. I disagree.

The Court construed this element of claim 14 to require that the cradle structure be permanently open towards the open air. As the ’328 Patent explains this feature of the cradle structure enables the shaving apparatus to be inserted in the cradle structure without any effort and to be removed without the need to utilize any parts closing the cradle structure. See ’328 Patent, col. 2, lines 49-51.

In the Davies device, Mr. Phillips supposed cradle structure – tray 74 – is contained within container 12, which is closed to the open air. See Davies Patent, col. 3, lines 24-26 (“[T]he container 12 has a lower rectangular liquid tank 26 with an open top closed by a hinged cover or lid 28.”). The vent provided by blower 22 and the deodorizing cartridge 54 does not render tray 74 permanently open to atmosphere; the operator must open the lid to insert or remove the items to be cleaned from the tray.

Therefore, in addition to its failure to disclose the other elements discussed in connection with my discussion of claim 11, the Davies Patent does not disclose the claimed cradle structure that is permanently open to the atmosphere.

Maatz Patent

Mr. Phillips opines that the Maatz Patent anticipates claim 14 of the ’328 Patent. See Phillips Report at ¶¶128-129. For at least the reasons set forth above in connection with my discussion of claim 11 of the ’328 Patent and the Maatz Patent, I disagree.

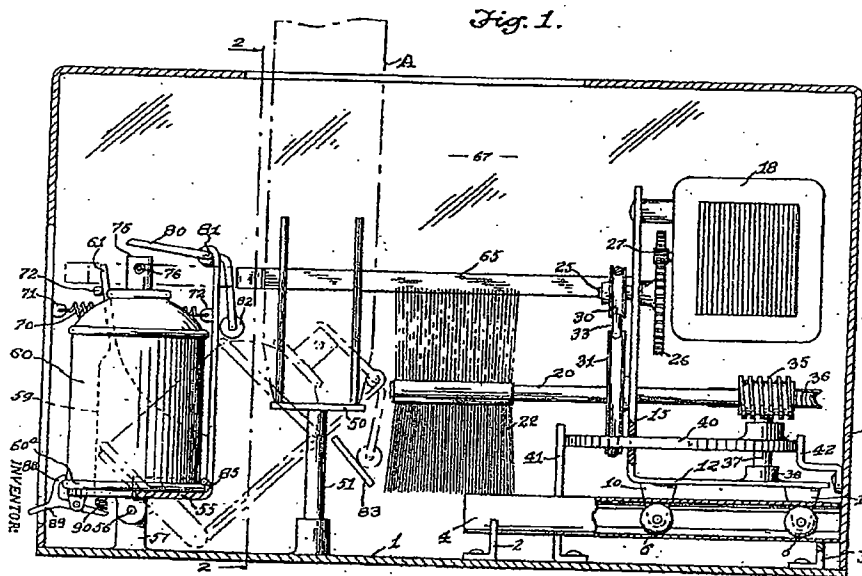
Loeffler Patent

Mr. Phillips opines that the Loeffler Patent (U.S. Patent No. 2,976,552) anticipates claim 14 of the ’328 Patent. See Phillips Report at ¶¶132-138. I disagree. In particular, the Loeffler Patent fails to disclose at least the following elements of claim 14:

- “a cleaning fluid container,”
- “a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure,” and
- “said cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure.”

The Loeffler Patent discloses a device for cleaning and subsequently sterilizing electric hair clippers. See Loeffler Patent, col. 1, lines 15-17. The Loeffler device includes a system consisting of gears, cams, pulleys, and belts that cause brushes 22 and 23 (not

shown) to brush hair and debris from the head of the clippers (A), seated in a cradle (50) shaped to receive the clipper head. *See id.* at col. 2, lines 8-44. After this cleaning operation, a depressible valve (75) of a conventional spray bottle (60) containing sterilizing fluid is depressed, causing sterilizing fluid to be sprayed against the surface of the clipper head. *See id.* at col. 2, line 72 through col. 3, line 21. After the spray can is spent, it can be replaced. *See id.* at col. 3, lines 23-41.



Cleaning Fluid Container. Mr. Phillips states that the device disclosed by Loeffler includes the claimed "a cleaning fluid container." *See Phillips Report* at ¶136 ("In the Loeffler patent, the cleaning device includes a spray can that holds a cleaning and sterilizing fluid."). I disagree.

The fluid in spray can 60 of the Loeffler device sterilizes the shaver; it does not clean it. *See Loeffler Patent* at col. 1, lines 36-44 and col. 2 lines 45-48 ("means must be provided to apply a sterilizing fluid to the clipper head at the end of each brush sweeping operation"). In the Loeffler device, the brushing operation cleans the shaving head, and then a small amount of fluid is applied to the shaving head to sterilize it. This is only enough to coat the surfaces of the shaving head and then dry by evaporation. As is clear from Figure 1 of the Loeffler Patent (reproduced immediately above), there is no provision to catch or contain the contaminated fluid that would drain from the shaving head in a fluidic cleaning operation.

Therefore, the Loeffler Patent does not disclose the claimed cleaning fluid container.

Feed Device Element. Mr. Phillips next argues that the Loeffler device's depressible valve 75, along with opening 76, constitute claimed "a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure." *See Phillips Report* at ¶137. I disagree.

Valve 75 and opening 76 at the top of the conventional spray can 60 do not constitute a mechanism that feeds cleaning fluid from the cleaning fluid container to the cradle structure. Valve 75 and opening 76 cannot rightly be called fluid feed devices. The valve 75 is a flow control device, and the opening 76 is a port. Moreover, as we have already discussed, the Loeffler device applies sterilizing fluid, not cleaning fluid.

Therefore, the Loeffler Patent does not disclose the claimed feed device.

Elevation Of The Cradle Structure Element. Mr. Phillips next argues that, for at least some of the time, the Loeffler device contains a cleaning fluid container that is below the cradle 50. There is no cleaning fluid container in the Loeffler device. And the fluid level in the Loeffler device's sterilizing fluid container is not below the cradle structure until the spray can has been partially emptied.

Therefore, the Loeffler Patent does not disclose the claimed elevation of the cradle structure relative to the cleaning fluid level in the cleaning fluid container during feeding.

In sum, the Loeffler Patent does not anticipate claim 14 of the '328 Patent because, at a minimum, it does not disclose the claimed cleaning fluid container, cleaning fluid feed device, and elevation of the cradle structure relative to the cleaning fluid level in the cleaning fluid container.

4. CLAIM 18 OF THE '328 PATENT

Claim 18 of the '328 Patent is directed to a cleaning device comprising:

- a cradle structure adapted to receive a shaving head of a shaving apparatus,
- a cleaning fluid container,
- a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure,
- said cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure, and
- a bracket for insertion of the shaving apparatus therein.

'328 Patent, col. 15, lines 7-18. Claim 18 of the '328 Patent is identical to claim 11 except that claim 18 includes the limitation that the cleaning system include a bracket for insertion of the shaver, and does not require that it include a dryer. In all other respects, claim 18 is identical to claim 11.

McKiney Patent

Mr. Phillips opines that the McKiney Patent anticipates claim 18 of the '328 Patent. See Phillips Report at ¶¶111-112. For at least the reasons set forth above in connection with my discussion of the McKiney Patent and claim 11 of the '328 Patent, I disagree.

Bracket Element. In addition, Mr. Phillips argues that shelf 34, slot 38, and magnets 46 of the McKiney sterilizer are "brackets for insertion of the shaver apparatus therein." I disagree.

The Court has construed the term "bracket" to be a bracket or projecting support. Neither slot 38 nor magnets 46 is properly considered a bracket by anyone of ordinary skill in the art.¹ In addition, while a shelf may in certain circumstances be considered a bracket or projecting support, the shelf 34 of the McKiney sterilizer is not one "for insertion of the shaver apparatus." In particular, shelf 34 is designed to hold scissors and wet razors. See McKiney Patent at col. 3, lines 27-32. It is not a projecting support or bracket for insertion of a hair clipper apparatus – Mr. Phillips' supposed shaving apparatus. As discussed above, the hair clipper apparatus is sterilized in the McKiney Patent by disassembly of the clipper blades, which are then held on shelf 44 with magnets.

Therefore, the McKiney Patent does not disclose the claimed bracket element of claim 18 of the '328 Patent.

In sum, in addition to its failure to disclose the other elements discussed in connection with my discussion of claim 11, the McKiney Patent does not disclose the claimed bracket of claim 18 of the '328 Patent. Therefore, the McKiney Patent does not anticipate claim 18 of the '328 Patent.

Maatz Patent

Mr. Phillips opines that the Maatz Patent anticipates claim 18 of the '328 Patent. See Phillips Report at ¶¶130-131. For at least the reasons set forth above in connection with my discussion of the Maatz Patent and claim 11 of the '328 Patent, I disagree.

¹ Mr. Phillips suggests that there is a dispute between the parties as to the level of ordinary skill in the art. See Phillips Report at ¶¶ 31-40. I do not believe that there is. I agree with Mr. Phillips that the one of ordinary skill in the art would be an engineer with a Bachelor of Science in Mechanical Engineering and a few years of industry experience. However, the level of ordinary skill should also take into account the skill of the actual inventors. In this case, I understand that Mr. Braun lacks a formal B.S. degree, though prior to working at Braun, he took some courses, completed an apprenticeship and internship, and received a technical degree in Germany. See Phillips Report, Ex. 16, Vol. 1, pp. 22-24. At the time Mr. Braun invented the cleaning device described in the patent-in-suit, however, he had substantial design experience in the dry shaving industry. See *id.* at p. 29. Therefore, the one of ordinary skill should be either (1) an engineer with a B.S. in Mechanical Engineering with a few years of industry experience, or (2) an engineer with equivalent experience in mechanical design.

Bracket Element. In addition, Mr. Phillips argues that “rack 14 and a series of magnets” are all “brackets for insertion of the shaver apparatus therein.” See Phillips Report at ¶131. I disagree.

As discussed above in connection with the claimed bracket and the McKiney Patent, a magnet is not a bracket or projecting support. Moreover, there is no “rack 14” in the Maatz patent. The number 14 refers to a barber’s countertop, which is not part of the Maatz invention. See Maatz Patent, col. 2, lines 21-24. Assuming that Mr. Phillips meant that rack 15 is a bracket for insertion of the shaver apparatus therein, I disagree. While a rack, like a shelf, can be considered in certain circumstances a bracket, the rack 15 of the Maatz sterilizer is not one “for the insertion of the shaver apparatus.” In particular, rack 15 is not a projecting support or bracket for insertion of a hair clipper apparatus. As discussed above, the hair clipper apparatus is sterilized in the Maatz Patent by disassembly of the clipper blades, which are then held on rack 15 by magnets.

Therefore, the Maatz Patent does not disclose the claimed bracket element of claim 18 of the ’328 Patent.

In sum, in addition to its failure to disclose the other elements discussed in connection with my discussion of claim 11, the Maatz Patent does not disclose the claimed bracket of claim 18 of the ’328 Patent. Therefore, the Maatz Patent does not anticipate claim 18 of the ’328 Patent.

Loeffler Patent

Mr. Phillips opines that the Loeffler Patent anticipates claim 18 of the ’328 Patent. See Phillips Report at ¶¶139-140. For at least the reasons set forth above in connection with my discussion of the Loeffler Patent and claim 14 of the ’328 Patent, I disagree.

Bracket Element. In addition, Mr. Phillips argues that the “opening at the top of enclosure 1 into which the shaving apparatus is inserted” is a “bracket for insertion of the shaver apparatus therein.” See Phillips Report at ¶131. I disagree.

From Figures 1 and 2 of the Loeffler Patent, it is clear that the opening at the top of enclosure 1 must be larger than the hair clipper apparatus in order to allow insertion of the hair clippers. And, in Figure 1 of the Loeffler Patent, the opening is drawn larger than the shaver, indicating a large clearance between the shaver and the enclosure. There is nothing in the Loeffler Patent to indicate that this opening provides any support for the hair clippers.

Therefore, the Loeffler Patent does not disclose the claimed bracket element of claim 18 of the ’328 Patent.

In sum, in addition to its failure to disclose the other elements discussed in connection with my discussion of claim 14, the Loeffler Patent does not disclose the claimed bracket of claim 18 of the ’328 Patent. Therefore, the Loeffler Patent does not anticipate claim 18 of the ’328 Patent.

B. THE '556 PATENT**1. CLAIM 1 OF THE '556 PATENT**

Claim 1 of the '556 Patent is directed to a cleaning device for cleaning a shaving head of a dry shaving apparatus, comprising:

a cradle structure adapted to receive therein the shaving head,

a cleaning fluid container separate from the cradle structure for holding a cleaning fluid,

a filter, and

a fluid feed mechanism which feeds the cleaning fluid after it passes through the filter to the cradle structure during cleaning,

said container and filter being separable from the cradle structure as a unit.

'556 Patent, col. 11, lines 16-26.

MeKiney Patent

Mr. Phillips opines that the MeKiney Patent anticipates claim 1 of the '556 Patent. See Phillips Report at ¶¶82-32. I disagree. In particular, the MeKiney Patent does not disclose the following elements of claim 1 of the '556 Patent:

- a cleaning device for cleaning a shaving head of a dry shaving apparatus;
- a cradle structure adapted to receive therein the shaving head; and
- a cleaning fluid container separate from the cradle structure for holding a cleaning fluid.

Preamble Limitation. Mr. Phillips argues that the MeKiney Patent discloses a cleaning device for cleaning a shaving head of a dry shaving apparatus. See Phillips Report at ¶88. I disagree. At best, the MeKiney Patent discloses a sterilizing device for sterilizing clipper blades that have been disassembled from the head of a clipper apparatus. It does not disclose a device for cleaning the clipper head itself.

Therefore, the MeKiney Patent does not disclose the preamble limitation of claim 1 of the '556 patent that the requisite cleaning device be one for cleaning a shaving head of a dry shaving apparatus.

Cradle Structure Element. Mr. Phillips next argues that the shelf 44 and tank 12 of the MeKiney sterilizer are "a cradle structure adapted to receive therein the shaving head." I disagree.

The Court has construed the cradle element of each of the asserted claims of the '556 Patent, including claim 1, to be a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both. This is the same construction given to the cradle structure element of each of the asserted claims of the '328 Patent.

Therefore, for at least the reasons set forth above in my discussion of the McKiney Patent and claim 11 of the '328 Patent, the McKiney Patent does not disclose the claimed cradle structure.

Cleaning Fluid Container Element. Mr. Phillips next argues that tank 14 of the McKiney device is "a cleaning fluid container separate from the cradle structure for holding a cleaning fluid." See Phillips Report at ¶85. I disagree.

The Court has construed the cleaning fluid container element of claim 1 of the '556 Patent to be a separate cleaning fluid container that is a removable cartridge which holds cleaning fluid. One skilled in the art would understand that a cartridge is a case or container that holds a substance, device, or material which is difficult, troublesome, or awkward to handle and that usually can be easily changed. Tank 14 is not a removable cartridge. To remove tank 14 from the McKiney sterilizer, one would need, at a minimum, to disconnect conduit 18. Such an operation is laborious since no quick disconnection mechanism is provided. Moreover, pump 16 is seated on the lower tank 14, and would remain seated on the lower tank 14 if the upper and lower tanks were separated. Thus, tank 14 is not readily removable from the cleaning device and therefore, not a removable cartridge.

Therefore, the McKiney Patent does not disclose the claimed cleaning fluid container.

In sum, the McKiney Patent does not anticipate claim 1 of the '556 Patent because, at a minimum, it does not disclose the claimed cleaning device to clean the shaving head of a dry shaving apparatus, cradle structure, and cleaning fluid container.

Maatz Patent

Mr. Phillips opines that the Maatz Patent anticipates claim 1 of the '556 Patent. See Phillips Report at ¶¶92-98. I disagree. In particular, the Maatz Patent does not disclose as least the following elements of claim 1 of the '556 Patent.

- a cleaning device for cleaning a shaving head of a dry shaving apparatus; and
- a cradle structure adapted to receive therein the shaving head.

Preamble Limitation. Mr. Phillips argues that the Maatz sterilizer is "a cleaning device for cleaning a shaving head of a dry shaving apparatus." See Phillips Report at ¶93. I disagree. In particular, the Maatz sterilizer is designed to clean barber tools. Even if a hair clipper apparatus is considered a dry shaving apparatus used by barbers, the Maatz

device is not a device to clean the clipper head of the clipper apparatus. Rather, as discussed above, the Maatz device would require disassembly of the clipper head and removal of the clipper blades. The clipper blades could then be sterilized in the Maatz device.

Therefore, the Maatz device does not disclose a cleaning device for cleaning a shaving head of a dry shaving apparatus.

Cradle Structure Element. Mr. Phillips next argues that the cleaning tank 10 of the Maatz device is "a cradle structure adapted to receive therein the shaving head." Because the cradle structure element of claim 1 of the '556 Patent has been construed identically to the cradle structure element of claim 11 of the '328 Patent, I disagree with Mr. Phillips for at least the reasons set forth above in my discussion of the Maatz Patent and claim 11 of the '328 Patent.

Therefore, the Maatz device does not disclose the claimed cradle structure element.

In sum, the Maatz Patent does not anticipate claim 1 of the '556 Patent because, at a minimum, it does not disclose the claimed cleaning device to clean the shaving head of a dry shaving apparatus and cradle structure.

2. CLAIM 6² OF THE '556 PATENT

Claim 6 of the '556 Patent is identical to claim 1 except that it includes the further limitation that the cleaning fluid container include ports through which cleaning fluid pass in and out of the cleaning fluid container.

McKiney Patent

Mr. Phillips suggests that the McKiney Patent anticipates claim 6 of the '556 Patent. See Phillips Report at ¶90. I disagree for at least the reasons set for above in my discussion of the claim 1 of the '556 Patent and the McKiney Patent.

Maatz Patent

Mr. Phillips suggests that the Maatz Patent anticipates claim 6 of the '556 Patent. See Phillips Report at ¶100. I disagree for at least the reasons set for above in my discussion of the claim 1 of the '556 Patent and the Maatz Patent.

3. CLAIM 18 OF THE '556 PATENT

Claim 18 of the '556 Patent is identical to claim 1 except that it includes the further limitation that the cradle structure be open to the atmosphere and supplied with cleaning fluid from cleaning fluid container by means of the fluid feed mechanism.

² Because Claim 2 of the '556 Patent is not an asserted claim, I have not reviewed Mr. Phillips' comments with regard to the validity of that claim. I reserve, however, the right to do so should either party or the Court request that I do so.

McKinney Patent

Mr. Phillips suggests that the McKinney Patent anticipates claim 18 of the '556 Patent. See Phillips Report at ¶91. I disagree for at least the reasons set for above in my discussion of the claim 1 of the '556 Patent and the McKinney Patent.

Maatz Patent

Mr. Phillips suggests that the Maatz Patent anticipates claim 18 of the '556 Patent. See Phillips Report at ¶101. I disagree for at least the reasons set for above in my discussion of the claim 1 of the '556 Patent and the Maatz Patent.

IV. NONE OF THE CLAIMS OF THE '328 AND '556 PATENTS IS INVALID ON THE GROUND OF OBVIOUSNESS

A. CLAIM 12 OF THE '328 PATENT

Claim 12 of the '328 Patent recites, "A device as claimed in claim 11, wherein the drying device comprises an impeller." See '328 Patent, col. 14, lines 24-25.

Mr. Phillips opines that claim 12 is obvious in light of the McKinney or Maatz Patents combined with the Davies Patent, Salas Patent (U.S. Patent No. 4,480,394), Suzuki Patent (U.S. Patent No. 5,076,306), or an ultrasonic cleaning system to which the inventors at Braun had access. See Phillips Report at ¶¶ 143-154. I disagree.

To begin, Mr. Phillips' argument rests on the false premise that claim 11 of the '328 Patent is anticipated by the McKinney and Maatz Patents.³ As I have explained above, claim 11 is not anticipated by either the McKinney or Maatz Patents because, at a minimum, neither of those prior art references discloses the claimed cradle structure or drying device. Therefore, Mr. Phillips' entire "obviousness" analysis fails to address these additional elements of claim 12 of the '328 Patent that are not present in either the McKinney or Maatz Patents.⁴

Even if one were to assume for purposes of discussion that the McKinney and Maatz Patents anticipate claim 11, I disagree with Mr. Phillips' conclusion that the addition of an impeller for drying the clipper blades cleaned in these sterilizing devices is obvious. The act of inventing a cleaning system that employs an impeller for drying of a shaving head was not complete--and claim 12 could not have been asserted--until the inventors could teach one skilled in the art how to successfully incorporate a blower into the cleaning system. This required significant inventiveness, as I explain in the following.

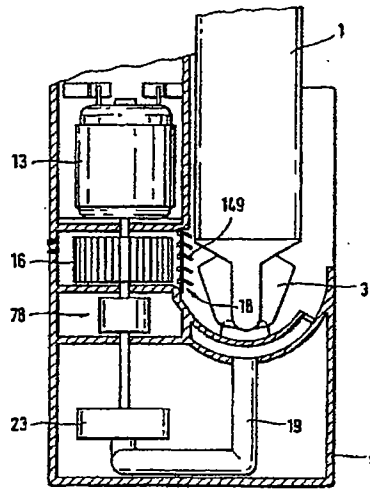
The cleaning system disclosed in the '328 Patent (Figure 12 of which is reproduced below) activates the shaver during the cleaning operation in order to aid in dislodging particles from the interior of the shaving head. As explained in the specification, "Owing

³ "The only difference between claim 12 and both the McKinney Patent and the Maatz Patent is that there is no impeller." Phillips Report at ¶143.

⁴ To the extent Mr. Phillips provides such an analysis, I reserve the right to respond.

to the fluid being agitated, the fluid level in the cradle 7 is temporarily increased, while at the same time splashes are produced in the area of the shaving head 3. . . .” ’328 Patent

Fig. 12



at col. 9, lines 9-12. An inventor wishing to employ a blower to aid in drying in such a system would need to invent a method for preventing the contaminated cleaning fluid from reaching the blower system (or entering any conduits that might be used to channel air from the blower system to the shaving head) as it is agitated and splashed.

To solve this problem, the inventors of the patents-in-suit devised the louvered shutter system 149 disclosed in the specification of the ’328 Patent. These shutters are held closed by the impeller during the fluid feeding operation, preventing any cleaning fluid from reaching the blower system. *See* ’328 Patent, at col. 9, lines 9-12. During the drying operation, the rotation of the impeller is reversed, and the resulting flow of air forces the shutters open, directing the air toward the shaving head. *See id.* at col. 9, lines 12-18. The shutter system enables use of an impeller in close proximity to the shaving head to blow directly upon it through a large aperture. Such a configuration required significant inventiveness, and is by no means rendered obvious by the references cited by Mr. Phillips.

Suzuki Patent

The Suzuki Patent describes a system for circulating heated and dehumidified air through the closed chamber of a dishwasher in order to dry tableware therein. An elaborate system of ducts, baffles, and drains are described to achieve these ends. Such a system is not readily applicable to a system that is open to atmosphere, and considerable inventiveness would be required by one skilled in the art to arrive at the arrangement disclosed in the ’328 Patent.

Davies Patent

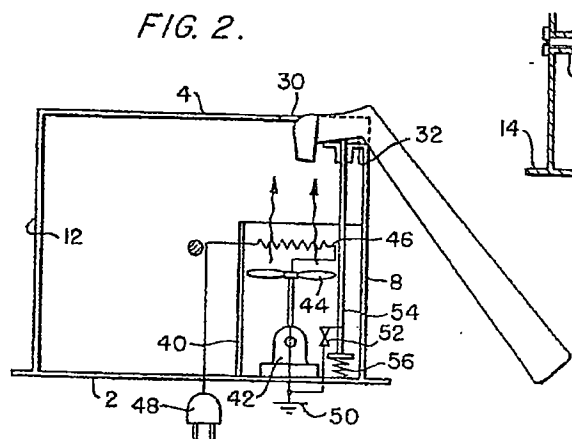
As I have explained above, the cleaning system described in the Davies Patent resides in a housing with a lid in which a blower 22 is mounted to exhaust gas from the housing (as described in the Davies Patent at col. 5, lines 45-48) or to circulate gas within the housing (as described in the Davies Patent at col. 5, lines 53-64). The induced gas flows aid in the drying of the objects in the tray 74. Such a configuration could not be readily adapted to the cleaning system of the McKiney or Maatz sterilizers, which are open to atmosphere and contain no lid. Moreover, a blower mounted in the lid of a cleaning system as taught by the Davies Patent would require some protection (for example, a shutter or system of baffles) if the cleaning fluid was agitated and caused to splash.

The Ultrasonic Cleaning Device

As described by Mr. Juergen Hoeser, the ultrasonic cleaning device used in Braun's laboratory includes a wire mesh basket into which "dirty cutting parts" are placed and then submerged into a tank to be cleaned ultrasonically. *See Phillips Report, Ex. 17, Vol. 2, pp. 30-33.* After cleaning, the operator removes the basket from the liquid, covers the basket using his or her hand, and uses pressurized air to dry it. *See id.* at Vol. 2, p. 33. Knowledge of such a system would not render obvious to one skilled in the art a method for incorporation of a blower into a system that cleans and dries the shaving head in a single station without disassembly from the shaver.

Salas Patent

The Salas Patent describes a system wherein a blower and heater are mounted below a safety or wet razor in order to dry its blades. Figure 2 of the Salas Patent is reproduced below. The Salas Patent describes a system that serves only as a dryer, and therefore



the problems of incorporation of the drying system into a wet (or dry) cleaning system are not addressed at all. For example, the Salas Patent does not teach any method for preventing contaminated cleaning fluid or even dust particles from falling onto the heating element and impeller described.

In sum, none of these references renders obvious claim 12 of the '328 Patent.

B. CLAIM 18 OF THE '328 PATENT

Claim 18 of the '328 Patent is identical to claim 11 except that claim 18 includes the limitation that the cleaning system include a bracket for insertion of the shaver, and does not require that it include a dryer. In all other respects, claim 18 is identical to claim 11.

Mr. Phillips opines that the McKiney, Maatz, and Loeffler Patents anticipate claim 18, and then continues to argue that even if these references do not anticipate claim 18, it would have been obvious to add a bracket to these inventions. See Phillips Report at ¶155. As with his discussion of claim 12 of the '328 Patent, Mr. Phillips fails to provide an analysis for the other elements of claim 18 that are not present in any of these three prior art reference.⁵

Even if one were to assume for the sake of discussion that the only element of claim 18 that was absent from the McKiney, Maatz, and Loeffler Patents was the claimed bracket, I disagree with Mr. Phillips' conclusion that the addition of the claimed bracket would have been obvious in light of thesis of Zeischke or the supposed suggestion of Helmut Kraus.

Zeischke Thesis

Mr. Zeischke describes a system for cleaning a shaving system using dry brushing. See Phillips Report, Ex. 31. The sketches in his thesis show a cleaning station with two distinct locations for the shaver:

1. A cleaning position indicated by the translated text as "introduce shaver." These are labeled in the translation as item 2 on page 41 of Zeischke and as item 1 on page 42 of Zeischke.
2. A storage and charging position indicated by the translated text as "park position, shaver for charging." These are labeled as item 8 on page 41 of Zeischke and item 6 on page 42 of Zeischke.

Mr. Phillips argues that these "park positions" constitute brackets as construed by the Court. See Phillips Report at ¶156. I disagree. A rectangle with some text indicating a location in which a shaver can be placed is not a drawing of a bracket. (In fact, the rectangle sketched on page 41 of the thesis is not even drawn with an opening to the exterior of the housing.) Rather, these rectangles serve only to indicate the general location where a shaver could be placed for storage and charging.

More importantly, even if Mr. Zeischke had drawn a bracket into which the electronic shaver could be inserted for storage and charging, this would not have taught a bracket into which the shaver could be inserted during cleaning. It would require inventiveness

⁵ To the extent Mr. Phillips provides any such analysis, I reserve the right to respond.

for one skilled in the art to go from Mr. Zeischke's system to one in which a bracket is positioned so that the shaver is inserted therein during the cleaning operation.

Helmut Kraus Suggestion

Mr. Phillips also argues that the suggestion by Mr. Helmut Kraus of the VDE, a German regulatory agency for approbation, that an interlock was needed renders the introduction of a bracket to the system obvious. See Phillips Report at ¶158. I disagree. There are many means for providing an interlock, including, for example, provision of a flexible or moveable structure to engage the electrical connectors on the shaver. That one skilled in the art should understand the need for an interlock does not render obvious its realization using a bracket incorporated into the system as claimed in the '328 Patent.

In sum, none of these references renders obvious claim 18 of the '328 Patent.

V. INDEFINITENESS

Mr. Phillips opines that the "cradle structure" element of the asserted claims of the '328 and the '556 Patents are "indefinite" because, according to Mr. Phillips, the Court's construction "does not distinguish the structures that Braun argued were not 'cradle structures' that met the limitations in the patent[s]." Phillips Report at ¶49. I disagree.

The cradle structure element of the asserted claims of the '328 Patent is "a cradle structure adapted to receive a shaving head of a shaving apparatus." The cradle structure element of the '556 Patent is "a cradle structure adapted to receive therein the shaving head." These elements have been construed by the Court to be a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both.

A cradle is defined in the McGraw-Hill Dictionary of Scientific & Technical Terms (6th ed. 2003), as a "framework or other resting place for supporting or restraining objects." Thus, one of ordinary skill in the art would recognize that the claimed cradle structure was a framework for supporting an object – in this case, a framework adapted for supporting and receiving the shaving head of a dry shaving apparatus.

Contrary to Mr. Phillips' suggestion, the prosecution histories of the patents-in-suit are not at odds with either the Court's construction or the ordinary artisan's understanding of the patents.

Lee Patent

Claim 1 of the '556 patent was initially rejected because – according to the Examiner – the Lee Patent (U.S. Patent No. 3,890,988) disclosed "a cradle adapted to receive the article therein." See Phillips Report, Ex. 19 at B000084. The Lee patent (Figure 5 of which is reproduced below) discloses a metal sink 10 into which cleaning fluid is pumped by pump assembly 14 for cleaning automobile parts. See Lee Patent at col. 3, lines 37-

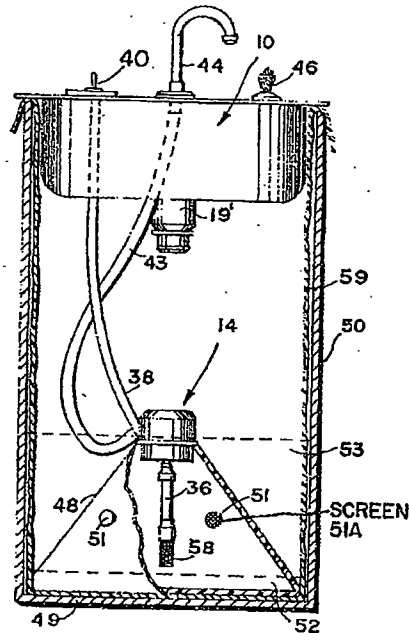


FIG. 5

42. In response to the Examiner's rejection, Braun distinguished the Lee Patent as nonanalogous art. See Phillips Report, Ex. 19 at B000095. In addition, Braun distinguished the Lee automotive part cleaner on the basis that it did not contain a cradle adapted to receive a shaving head. See id. at B000096. As Braun describes, the Lee device is "not adapted to 'cradle' anything much less a shaving head. The specification makes it quite clear that 'a cradle adapted to receive therein a shaving head' is not an open basin into which the shaving apparatus can be tossed without any means designed to particularly receive and/or cradle the shaving head." Id.

This prosecution history is consistent with the Court's construction. First, claim 1 of the '556 Patent already includes a preamble limitation, claiming the invention is a device for cleaning a shaving head of a dry shaver, not automotive parts. Second, the Court's construction make clear that the cradle structure is suitable for the specific use of receiving the shaving head of a shaving apparatus, which distinguishes it from the metal sink of the Lee Patent.

Schinn Patent

Braun's treatment of the Schinn Patent (U.S. Patent No. 4,815,486) during the prosecution history of the '556 Patent is consistent with the Court's construction of the cradle structure element.

The Schinn patent (Figure 2 of which is reproduced below) is a paint equipment cleaner wherein paint equipment is hung on hooks 18 or a wire basket 20 inside drum 14, which is

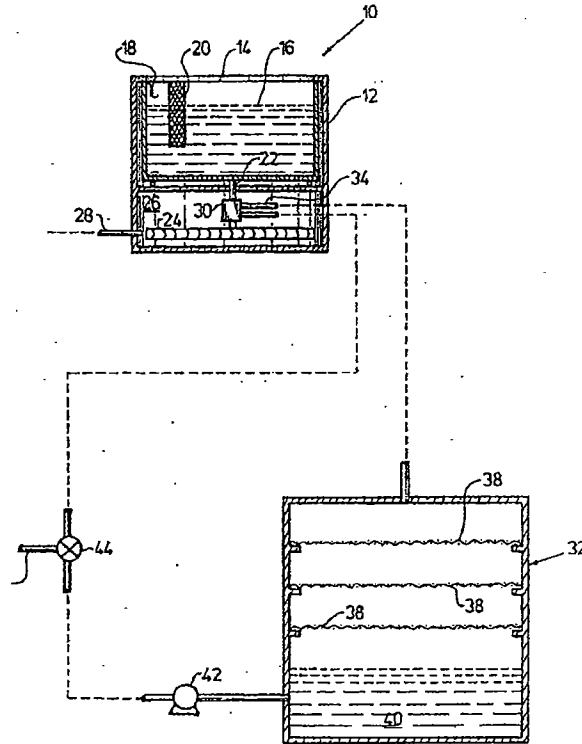


FIG 2

filled with solvent. Then, the entire drum is spun. The solvent is then pumped out of the drum 14 into a filtering cleaning tank. See Schinn Patent at col. 3, lines 63-67, col. 4, lines 30-55.

As with the Lee Patent, Braun objected to the Schinn patent as nonanalogous art. See Phillips Report, Ex. 19 at B000103-04. In addition, Braun distinguished the Schinn paint equipment cleaner on the ground that the patent did not contain a cradle adapted to receive a shaving head. See id. at B000103. The Schinn devices hooks and wire baskets are adapted to receive paint equipment. See id.

Thus, the prosecution history relating to the Schinn Patent is consistent with the Court's construction of the cradle structure element.

Cunningham Patent

Similarly, the '328 Patent's prosecution history of the Cunningham patent (U.S. Patent No. 5,335,394) is consistent with the Court's construction. The Cunningham cleaning device (Figures 2 and 4 of the Cunningham patent are reproduced below) consists of a U-shaped container (18), containing cleaning fluid, into which eyeglasses are inserted. See

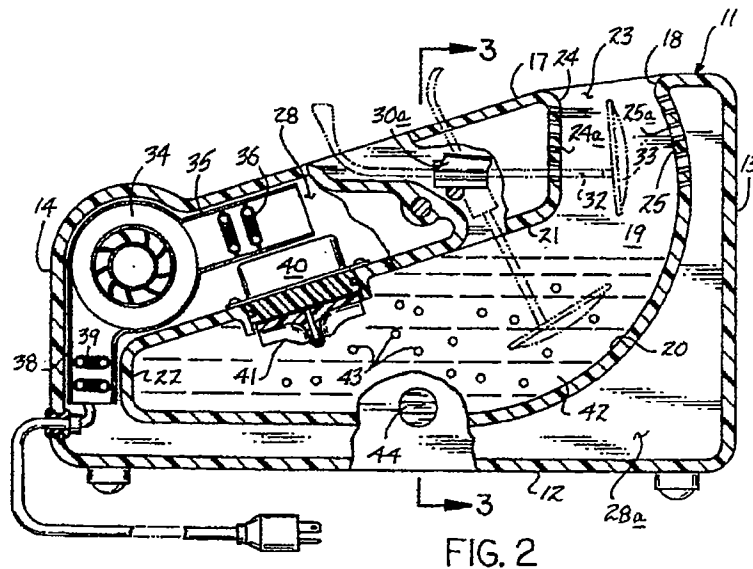


FIG. 2

Cunningham Patent, col. 3, lines 48-52. The eyeglasses are cleaned by means of an agitation device (40, 41) which circulates the cleaning fluid within the U-shaped container. See id. at col. 4, lines 37-42. Cunningham also discloses a basket 45 for

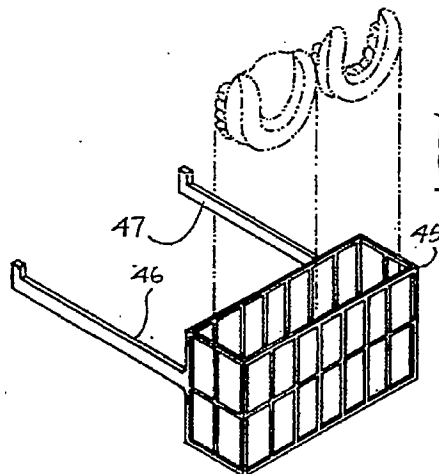


FIG. 4

placement of dentures. As with the eyeglasses, the basket 45 is dunked into the cleaning fluid held in U-shaped container 18.

As Braun explained in the prosecution history, the Cunningham patent does not teach a cradle to support an object into which cleaning fluid is fed that is above the fluid level of the cleaning fluid in the cleaning fluid container. See Phillips Report, Ex. 12 at B000335. It merely teaches a cleaning fluid container filled with cleaning fluid into which eyeglasses or a basket carrying dentures are dunked and cleaned through the circulation of cleaning fluid caused by an agitation device.

The Court's claim construction is consistent with this prosecution history.

In sum, the Court's claim construction is consistent with the prosecution history of the patents-in-suit. And, therefore, I disagree with Mr. Phillips' conclusion that the patents are indefinite.

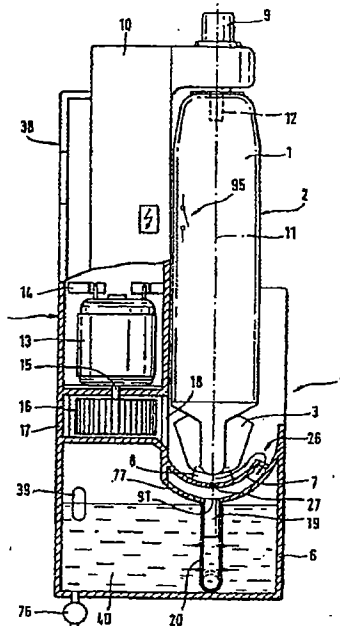
VI. WRITTEN DESCRIPTION

Mr. Phillips opines that the patents-in-suit are invalid because, according to Mr. Phillips, they lack an adequate written description of the cradle structure as construed by the Court. See Phillips Report at ¶54. I disagree.

As discussed above, the cradle structure element of the claims of the '328 and '556 Patents have been construed by the Court to be a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both. This construction is consistent with the written description of the inventions of these patents.

In particular, in the preferred embodiment of the inventions, the cradle 7 is a structure that supports and receives the shaving head of a shaving apparatus. The cradle 7 is able

Fig. 1



to receive fluid, retain fluid, or both receive and retain fluid. In the preferred embodiment, for example, the cradle is able to receive and retain fluid because the outlet port of the cradle is dimensioned such that the inflow of cleaning fluid from the pump is greater than the outflow of cleaning fluid. However, it would be clear to one of ordinary skill in the art that if the outlet port of the cradle were of a greater cross-sectional area, the inflow of cleaning fluid would be smaller than the outflow. In such a configuration, the cradle 7 would receive, but not retain cleaning fluid.

Moreover, I understand that limitations from the preferred embodiment ought not to be inserted into the claims. Thus, I do not consider the fact that in the preferred embodiment the outlet port of cradle 7 is dimensioned so that the inflow of cleaning fluid is greater than the outflow to be a limitation of the cradle structure element. In fact, such a limitation is found in dependent claim 2, which provides:

A device as claimed in claim 1, wherein a cross-sectional area of the outlet port is dimensioned such that during the cleaning operation the amount of cleaning fluid drained through the outlet port is smaller than the amount of cleaning fluid supplied to the cradle structure by the feeding device.

'328 Patent, col. 13, lines 38-43.

In addition, while this was the inventors' preferred embodiment, during deposition testimony Dr. Pahl testified that he had conceived of a cleaning system wherein liquid was not retained by the cradle, but was flushed through the shaver head. See Phillips Report, Ex. 14, at p. 80, lines 2-14. Dr. Pahl concluded that this was not an effective cleaning method, and therefore it is not surprising that this idea was not set forth in the patents as a preferred embodiment.

In sum, the Court's claim construction is consistent with the written description of the patents-in-suit. And, therefore, I disagree with Mr. Phillips' conclusion that the patents lack an adequate written description.

VII. NEW MATTER

Mr. Phillips opines that the U.S. patent applications for the '328 and '556 Patents contain new matter not present in the corresponding Germany applications because a "receptacle" is a different structure than a "cradle structure." See Phillips Report at ¶58. Mr. Phillips purports to support this opinion on his assertion that a "receptacle can merely maintain a liquid level" whereas a cradle structure can maintain a liquid level but has "the additional characteristic of receiving fluid, but then letting it run out" ⁶ Id. I disagree.

⁶ Mr. Phillips mistakenly concludes that the French Patent described in the '328 Patent specification was not in the corresponding German application. However, a review of the German application reveals that the French Patent was included in an addendum to the corresponding German application. See German Patent Application, Prosecution History at B001138ENG-B001140ENG.

One of ordinary skill in the art would not construe the phrase "a receptacle adapted to receive a shaving head of a shaving apparatus" as limited to those structures that retain liquid. A receptacle, like a cradle structure, can receive liquid, retain liquid, or both. One skilled in the art would understand that the receptacle receives the shaving head, as explicitly indicated by the phrase "adapted to receive a shaving head of a shaving apparatus." To one skilled in the art, use of the word "receptacle" rather than "cradle structure" therefore implies no difference in the manner that cleaning fluid is handled.

In sum, the patents-in-suit do not contain new matter absent in the corresponding German applications.

VIII. BEST MODE

Mr. Phillips opines that the inventors of the patents-in-suit failed to disclose the best mode contemplated by them for carrying out the invention because, according to Mr. Phillips, the inventors did not adequately disclose their preferred cleaning fluid. See Phillips Report at ¶¶60-66. I disagree.

Mr. Braun testified at his deposition that Dr. Pahl gave him the cleaning fluid used in the cleaning device, and he was not aware of its composition. He thought that the cleaning had to be fat soluble and talcum soluble. See Phillips Report, Ex. 16, Vol. I, p. 87, line 22 through p. 88, line 14.

Dr. Pahl testified at his deposition that the appropriate cleaning fluid contemplated by him at the time of the invention was "alcohol." See Phillips Report, Ex. 14, p. 165, lines 10-24. He was not sure whether it was methyl or ethyl alcohol. He thought that the cleaning fluid contained a "little bit of grease, of oil to lubricate the cutter elements, and a fragrance." Id. Dr. Pahl never determined what fragrance would be best. Id. at p. 166, lines 12-16. He further testified that while he initially had a cleaning fluid made, he subsequently used a spray sold by Braun. Id. at pp. 166-169.

Mr. Hoeser testified that he continued to work with an outside company to develop an appropriate cleaning fluid for the cleaning devices long after Mr. Braun and Dr. Pahl had developed their invention. See Phillips Report, Ex. 17, Vol. 2, p. 72-75.

Each patent states that the cleaning fluid that the inventors contemplated was a "fat-dissolving cleaning fluid." '328 Patent at col. 6, lines 14-16; '556 Patent at col. 4, lines 23-24. Among the most widely used fat solvents (especially in consumer applications) are alcohols, and therefore the phrase "fat-dissolving cleaning fluid" would immediately suggest to one skilled in the art the use of an alcohol-based cleaning fluid. It is not clear that the inventors knew of any special advantages of alcohol over other solvents, or that they were entirely clear as to what sorts of additives to use. Thus, the phrase "fat-dissolving cleaning fluid" provides an adequate guide to the reader toward the key property of the cleaning fluid.

In addition, because the application is cleaning a shaving head, one of ordinary skill would recognize that a lubricant would be desired to maintain the integrity of the cutters within the shaving head. Also, there are several reasons that a low viscosity cleaning fluid is desirable, including ease of pumping. Finally, because the cleaning product is a personal hygiene product, one of ordinary skill would know that a fragrance would be desired as part of the cleaning fluid.

Therefore, the patents-in-suit do not fail to disclose the best mode of carrying out the invention contemplated by the inventors.

IX. INVENTORSHIP

A. DR. PAHL

I understand that there is no dispute between Braun and Mr. Phillips that Dr. Pahl is a co-inventor of the patents-in-suit.

B. NORBERT SMETANA

Mr. Phillips opines that Norbert Smetana, an engineer who assisted Mr. Braun in the development of the type of drying device used in a prototype cleaning device developed by Mr. Braun, is a co-inventor of unasserted claim 13 of the '328 Patent. See Phillips Report at ¶69. I disagree.

Claim 13 of the '328 Patent provides: "A cleaning device as claimed in claim 12, wherein the drying device further comprises a heater."

Mr. Phillips argues that Mr. Smetana is a coinventor because, according to Mr. Phillips, Mr. Smetana had the idea for claim 13 of the '328 Patent. I disagree.

According to Dr. Pahl, the original prototype developed by Dr. Pahl in Leon, France had a heater and an impeller. See Phillips Report, Ex. 14, p. 110, lines 5-15; p. 148, lines 10-12. Mr. Hoeser further testified that a November 1992 presentation of Dr. Pahl's prototype illustrates the heater and fan of Dr. Pahl's original prototype. See Phillips Report, Ex. 17, Vol. 1, pp. 83-83. This prototype existed prior to Mr. Smetana's involvement in the cleaning device.

Moreover, the use of heat to speed drying was well known by the ordinary artisan prior to Mr. Smetana's involvement in the cleaning device. Indeed, as Mr. Smetana notes, hair dryers have been using impellers coupled with heating elements long before the time Dr. Pahl and Mr. Braun developed their cleaning device. See Phillips Report, Ex. 29, pp. 48-49, 50-51.

Therefore, Mr. Smetana is not a co-inventor of claim 13 of the '328 Patent.

C. HELMUT KRAUS

Mr. Phillips opines that Helmut Kraus, a regulator with the German testing agency for approbation – the VDE – is a co-inventor of unasserted claim 19 of the '328 Patent. See Phillips Report at ¶69. I disagree.

Claim 19 of the '328 Patent provides: "A cleaning device as claimed in claim 18, further comprising a switch for interlocking the shaving apparatus to the bracket."

Mr. Braun testified that, based on his own past experience, he was aware of the need to keep the shaver apparatus locked in place during the cleaning operation for safety reasons. See Phillips Report, Ex. 16, Vol. 1, pp. 76-77. He further testified that the idea of providing a switch for interlocking the shaving apparatus to the bracket was his idea. See id., Vol. 1, pp. 68-69. Dr. Pahl confirmed Mr. Braun's recollection. See Phillips Report, Ex. 14, pp. 111-113.

Mr. Kraus's suggestion that a mechanical lock is required to avoid harm to the operator of the shaving device merely restates a safety requirement about which Mr. Braun testified he was aware from his own past experience. The suggestion itself does not disclose how or where the lock should be implemented. In sum, the suggestion does not make Mr. Kraus a coinventor of claim 19, which requires a switch for interlocking the shaving apparatus to the bracket.

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X. CONCLUSION

I disagree with Mr. Phillips' conclusion that the asserted claims of the patents-in-suit are anticipated or obvious in light of the prior art cited by Mr. Phillips in his report. Also, I disagree with Mr. Phillips' conclusions on the issues of indefiniteness, written description, new matter, best mode and inventorship.



Samir Nayfeh
June 13, 2005